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NRO REVIEW COMPLETED

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CCW-0792-60

29 March 1960

MEMORANDUM FOR : Chief, Development Branch, DPD
SUBJECT : CORONA Follow-on Camera (1961)

1. For the past several months, we have been experiencing considerable trouble in attempting to successfully launch and operate a CORONA camera. It is felt that a good many factors, other than vehicle capability, have contributed to these failures. Such things as alignment of camera mainplates, skewed rollers versus helical, as well as the problem of triacetate versus polyester or crumar film. Other items that may have contributed to a small degree to these failures are evidenced in the attached trip reports.
2. To insure a better chance of success with the follow-on camera, if attempted, it is felt that it is most desirable to have the benefit of experience and ideas from FGIC and IX, as well as ITK, in attempting to improve our present configuration. These improvements should be pointed toward increased reliability, capability, and improved ground resolution.
3. Sometime ago, ITK submitted a proposal for improvements to the present CORONA configuration (see attached evaluation), and although this proposal is pointed toward increased reliability, there is some question concerning the feasibility of proceeding with such an approach.
4. IX has expressed a desire to review the present configuration and submit a proposal with their recommendations. Although they are reluctant to indicate what might be achieved until they have a chance to study the actual hardware, they have indicated a strong desire to be of service if they can recommend improvements in this configuration.
5. FGIC has, it seems, given considerable thought to a possible follow-on program and has indicated that they can see improvements made in the following areas:
 - (A) Superior Optics: They feel that they have available a lens of 24 inch focal length that would operate in the low contrast area, thus giving an improvement in ground resolution.

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(B) Scan Rate: Scan rate would be modified to operate at a constant scan rate, thus insuring a smoother operating camera and improved reliability.

(C) Camera Plate: Camera plate or plates would be improved to do away with present tie rods to insure constant alignment of camera rollers and platen.

(D) Presurrections: This is an area that they have indicated they would want to give further study to insure positive operation with either triacetate or polyester material.

(E) Film: They also intend to investigate the possibility of using 5 inch wide film. This would double present coverage capability and also reduce cycling rate, thus again improving reliability.

6. The above, coupled with the efforts and progress made by IK in the 117 L program, certainly seems to indicate that a competitive approach for the improvement of the present configuration is a most desirable one.

Slight

25X1



Attachments:

COR-0725-60 Evaluation of ITEK Proposal for a Follow-on High Acuity Camera
DPD-7417-59 Trip Report of [redacted] 25X1
COR-0790-50 Trip Report - [redacted] (CORONA)
 Trip Report - S. L. Green, dtd. 3 Nov 1959

25X1

DEV BR/DPD [redacted]
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